

PTO/SB/08a (05-03)

Approved for use through 04/30/2003. OMB 0651-0031

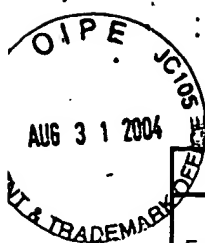
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

| | | | | |
|--|---|----|--------------------------|------------------|
| Substitute for form 1449A/PTO | | | Complete if Known | |
| SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) | | | Application Number | 09/868,694 |
| | | | Filing Date | October 10, 2001 |
| | | | First Named Inventor | Bertrand |
| | | | Art Unit | 2121 |
| | | | Examiner Name | Hiri |
| | | | Attorney Docket Number | 05222.00153 |
| Sheet | 1 | of | 4 | |

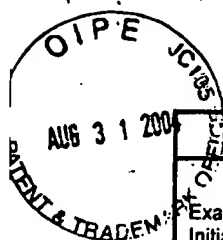
| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|--------------------------|---|-----------------------------------|---|--|----------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ - Number ⁴ - Kind Code ⁵ (if known) | | | | |
| lt | 1 | EP 0 689 132 A2 | 12/27/95 | Laffra | | |
| ld | 2 | EP 0 710 942 A2 | 05/08/96 | Siefert | | |
| lt | 3 | EP 0 798 655 A2 | 10/01/97 | Jervis, et al. | | |
| lt | 4 | WO 00/04478 | 01/27/00 | Jonsson | | |
| lt | 5 | WO 98/03953 | 01/29/98 | Simmons | | |
| lt | 6 | WO 98/25251 | 06/11/98 | Ho | | |
| lt | 7 | WO 98/32109 | 07/23/98 | De Lange | | |

| OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS | | | |
|--|--------------------------|--|----------------|
| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
| H | 8 | W. Doube, "A Browser-Based System to Support & Deliver DE," 1998 FIE Conference, Conference Proceedings, Vol. 1, pp. 479-484, Nov. 4-7, 1998 | |
| H | 9 | W. Regian and G. Pitts, "A Fuzzy Logic-Based Intelligent Tutoring System (ITS)," Information Processing 92, Vol. II, pp. 66-72, Dec. 1992. | |
| H | 10 | J. Reye, "A Goal-Centered Architecture for Intelligent Tutoring Systems," Proc. of 7th World Conf. on Artificial Intelligence in Education, pp. 307-314, Aug. 1995 | |
| H | 11 | R. Schank and D. Edelson, "A Role for AI in Education: Using Technology to Reshape Education," Northwestern University, The Institute for the Learning Sciences, Journal of Artificial Intelligence in Education, Winter 1990, pp. 1-24, January 1990 | |
| H | 12 | A. Nowakowski, "A Special Section -- Goal Based Scenarios: A New Approach to Professional Education: Reengineering Education at Andersen Consulting," Educational Technology, pp. 3-8, Nov.-Dec. 1994 | |
| H | 13 | R. Chellappa, A. Banua and A. Whinston, "An Electronic Infrastructure for a Virtual University," Communications of the ACM, Vol. 40, No. 9, pp. 56-58, Sep. 1997. | |
| H | 14 | K. Itoh M. Itami, K. Ichihara, J. Matsushita, T. Nomizo, T. Shimomura and T. Takahashi, "An Object-Oriented Architecture for Evolutional Development of Interactive Learning Environment with Coached Problem-Solving," Proc. Of 1997 World Conf. On Artificial Intelligence in Education, pp. 592-94, Dec. 1997 | |
| H | 15 | K. Nakabayashi, M. Maruama, Y. Koike, Y. Kato, H. Touhei and Y. Fukuhara, "Architecture of an Intelligent Tutoring System on the WWW," Artificial Intelligence in Education, pp. 39-46, Dec. 1997 | |
| H | 16 | D. McArthur, "Artificial Intelligence and Mathematics Education" at http://www.rand.org/ho/mcarthur/Papers/aiied.html , pp. 1-8, Jan. 2001 | |
| H | 17 | T. Murray, "Authoring Intelligent Tutoring Systems: An Analysis of the State of the Art" at http://www.cs.umass.edu/~tmurray/papers/ATSummary/AuthTools.html , pp. 1-35, July 2001 | |
| H | 18 | "Automate Your Business Plan Software" at www.business-plan.com/automate.html , pp. 1-4, July 2001 | |
| H | 19 | A. Gonzalez and L. Ingraham, "Automated Exercise Progression in Simulation-Based Training," IEEE Trans. On Systems, Man, and Cybernetics, Vol. 24, No. 6, pp. 863-74, June 1994 | |
| H | 20 | A. Muntjewerff, "Automated Training of Legal Reasoning" at http://www.bileta.ac.uk/94papers/muntjew.html , pp. 1-7, July 2001, 9 th BILETA Conference April, 1994 | |
| H | 21 | "Brainmaker" at http://people.becon.org/~echoscan/28-04.htm , July 2001 | |



OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|------------------------|--------------------------|--|----------------|
| H | 22 | Brainmaker Neural Network Application Examples at http://www.calsci.com/Applications.html , January 2001 | |
| H | 23 | C. Robinson, E. Arias and H. Eden, "Bridging the Virtual and the Physical: The InterSim as a Collaborative Support Interface," Artificial Intelligence in Education, pp. 556-58, Dec. 1997 | |
| H | 24 | C. Shreiner, "CAPTOR a Model for Delivering Web-Based Intelligent Tutoring System Technology", IEEE Proc. DASC vol. 2, pp 5.C.4.1-5 | |
| H | 25 | S. Prabhu, "Computer Aided Instruction for Statistics: A Knowledge-Based Systems Approach," Int'l J. of Computers in Adult Education and Training, Vol. 5(1), pp. 3-14., November 1995 | |
| H | 26 | J. Montgomery, R. Campbell and C. Moffett, "Conducting and Supporting a Goal-Based Scenario Learning Environment," Educational Technology, pp. 15-20, 1994 | |
| H | 27 | A. Zeller and D. Lütkehaus, "DDD--A Free Graphical Front-End for UNIX Debuggers," ACM Sigplan Notices, Vol. 31, No. 1, pp. 22-27, Jan. 1996. | |
| A | 28 | Vanguard Software Corporation "Decision Pro3.0" at www.vanguardsw.com/ , Jan. 2001 | |
| H | 29 | B. Cheek and A. Nee, "Developing a Design System into an Intelligent Tutoring System," Int'l J. Engr. Eud., Vol. 13(5), pp-341-46, Dec. 1997 | |
| H | 30 | T. Nogami, Y. Yokoi, I. Yanagisawa and S. Mitui, "Development of a Simulation-Based Intelligent Tutoring System for Assisting PID Control Learning," IEICE Transactions on Information and Systems, E77-D, No. 1, Tokyo Japan, pp. 108-117, Jan. 1994 | |
| H | 31 | J. Gonzalez, J. Lopez, F. Bustio, P., Corcuera and E. Mora, "Development of an Integrated Simulator and Real Time Plant Information System," Advances in Operational Safety of Nuclear Power Plants, Proceedings of an International Symposium, pp. 543-549, September 1996. | |
| H | 32 | P. Brusilovsky, S. Ritter and E. Schwarz, "Distributed Intelligent Tutoring on the Web," Artificial Intelligence in Education, pp. 482-89, Dec. 1997 | |
| H | 33 | R. Schank and M. Koruska, "Eight Goal-Based Scenario Tools", Technical Report # 67, Northwestern University, The Institute for the Learning Sciences; pp. 1-37, January 1996 | |
| H | 34 | J. Siemer and M. Angelides, "Embedding an Intelligent Tutoring System in a Business Gaming-Simulation Environment," Proc. Of the 1994 Winter Simulation Conference, pp. 1399-1406, Dec. 1994 | |
| A | 35 | Engines for Education" http://www.ils.nwu.edu/~e_for_e/nodes/I-M-INTRO-ZOOMER-pg.html ; July 2001. | |
| H | 36 | S. Taylor and J. Siemer, "Enhancing Simulation Education with Intelligent Tutoring Systems," Proc. Of the 1996 Winter Simulation Conf., pp. 675-80, Dec. 1996 | |
| H | 37 | J. Siemer and M. Angelides, "Evaluating Intelligent Tutoring with Gaming Simulations," Proc. Of the 1995 Winter Simulation Conf., pp. 1376-83, Dec. 1995 | |
| H | 38 | A. Mitrovic and B. Martin, "Evaluating the effectiveness of feedback in SQL-tutor", IEEE, proc. Int. workshop IWALT, pp 143-144, 2000 | |
| H | 39 | D. Foster, "FRA: Teaching Financial Accounting with a Goal-Based Scenario," Intelligent Systems in Accounting, Finance and Management, Vol. 4, pp. 173-189, September 1995 | |
| H | 40 | N. Livergood, "From Computer-Assisted Instruction to Intelligent Tutoring Systems," J. Artificial Intelligence in Education, V. 2(3), pp. 39-50, Dec. 1991 | |
| H | 41 | R. Shank, "Goal-Based Scenarios and Business Training: A Conversation with Roger C. Schank," Educational Technology, pp. 27-29, Nov.-Dec. 1994 | |
| H | 42 | A. Collins, "Goal-Based Scenarios and the Problem of Situated Learning: A Commentary on Andersen Consulting's Design of Goal-Based Scenarios," Educational Technology, pp. 30-32, Nov.-Dec. 1994 | |
| H | 43 | R. Shank, "Goal-Based Scenarios", Technical Report # 36, Northwestern University, The Institute for the Learning Sciences, pp. 1-30, December 1992, | |
| H | 44 | J. Rickel, "Intelligent Computer-Aided Instruction: A Survey Organized Around System Components," IEEE Inc., New York, Vol. 49, No. 1, pp. 40-57 - pp. 1-32, Jan. 1989 | |
| H | 45 | M. Yazdani, "Intelligent Tutoring Systems: An Overview" Experts Systems, Vol. 3, No. 3, pp. 154-162, July 1988 | |
| H | 46 | "Interactive Multimedia Instructs the Individual," Occupational Health & Safety Vol. 63, No. 10, pp. 144-145, Oct. 1994 | |
| H | 47 | J. Carroll and J. McKendree, "Interface Design Issue for Advice Giving Expert Systems", Comm. Of the ACM, vol 30, No. 1, pp14-31, January 1987 | |
| H | 48 | "KBLPS Overview" at www.cgi.com/CGIWEB/KBLPS/overindex4.html , August 1999 | |
| H | 49 | "Kiplinger TaxCut Press Releases" at http://www.taxcut.com/taxcu/98press_releases/pr98_nowshipping.html , July 2001 | |



OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issu number(s), publisher, city and/or country where published. | T ² |
|---------------------|-----------------------|--|----------------|
| H | 50 | G. Cole, "Learning with Computers," Accountancy Vol. 113, No. 1209, pp. 60-64, May 1984 | |
| H | 51 | J. Keys, R. Fulmer and S. Stumpf "Microworlds and Simuworlds: Practice Fields for the Learning Organization," Organizational Dynamics Vol. 24, No. 4, pp. 36-49, Spring 1998 | |
| H | 52 | "MUSE Patents" OCCAM Research Corporation, at www.muser.com/html/patents.html, January 2001 | |
| H | 53 | "News for ESAP" at www.hops.wharton.upenn.edu/~esap/news.html, August 1999 | |
| H | 54 | M. Cohn, "No More Boring CPE," Accounting Technology, pp. 27-35, July 1997 | |
| H | 55 | K. Lai, T. Malon, K. Yu, "Object Lens: A 'Spreadsheet' for Cooperative Work", ACM Transactions on Information Systems, Vol. 6, No. 4, pp. 332-353, Oct. 1988 | |
| H | 56 | J. Brown, R. Burton and J. DeKleer, "Pedagogical, Natural Language and Knowledge Engineering Techniques in SOPHIE I, II, and III," Intelligent Tutoring Systems, D. Sleeman & J.S. Brown eds., pp. 227-82, Dec. 1982 | |
| H | 57 | J. Caird, "Persistent Issues in the Application of Virtual Environment Systems to Training," Proceedings. Third Annual Symposium on Human Interaction with Complex Systems, IEEE, pp. 124-32, August 1996 | |
| H | 58 | D. Bill, "Popular Theory Supporting the Use of Computer Simulation for Experiential Learning," http://www.centurionsys.com/rtcl57.html , pp. 1-5, July 2001 | |
| H | 59 | C. Cleary and R. Bareiss, "Practical Methods for Automatically Generating Typed Links", The Institute for Learning Sciences, Northwestern University, ACM Hypertext, pp 31-41, 1996 | |
| H | 60 | "Projects: FinPlan System", Russian Research Institute of Artificial Intelligence, at http://www.miai.org.ru/FinPlan , July 2001 | |
| H | 61 | R. Azevedo, S. Lajole, M. Desaulniers, D. Fleiszer and P. Bret, "RadTutor: The Theoretical and Empirical Basis for the Design of a Mammography Interpretation Tutor," Proc. of 1997 World Conf. On Artificial Intelligence in Education, pp. 386-393 Dec. 1997 | |
| H | 62 | T. Cooper and N. Wogrin, "Rule-Based Programming with OPS5" Morgan Kaufmann Publishers, at www.mkp.com/books_catalog/O-934613-51-6.asp , August 1999 | |
| H | 63 | R. Min, "Simulation Technology and Parallelism in Learning Environments" at http://www.to.utwente.nl/prj/min/Book/chapter1.htm , pp. 1-26, July 2001 | |
| H | 64 | J. Shi, T. Smith, J. Granieri and N. Badler, "Smart Avatars in JackMOO," Proceedings of the 1999 IEEE Conference on Virtual Reality, pp. 156-163, 1999 | |
| H | 65 | V. Shute, "SMART Evaluation: Cognitive Diagnosis, Mastery Learning & Remediation," Proc. of 7th World Conf. On Artificial Intelligence in Education, pp. 123-130, Aug. 1995 | |
| H | 66 | C. Hafner and V. Wise, "Smartlaw: Adapting Classic Expert System Techniques for the Legal Research Domain", ACM pp 133-141, 1993 | |
| H | 67 | "Socialized Collaborative Learning in Multimedia Virtual Worlds" National University of Singapore, School Computing, at http://www.comp.nus.edu.sg/labs/learning/lets/vrml.html , pp. 1-4, July 2001 | |
| H | 68 | C. Whittington and L. Campbell, "Task-Oriented Learning on the Web", Innovations in Education and Training International, Vol. 36, No. 1, pp. 26-33, Feb. 1999 | |
| H | 69 | D. Foster, "Teaching Real-World Analysis Skills for Goal-Based Scenario," The Institute for the Learning Sciences, Northwestern University, pp. 68-74, July 2001 | |
| H | 70 | M. Papagni, V. Cirillo and A. Micarelli, "Teaching Through Case-Based Reasoning: An ITS Engine Applied to Business Communication," Proc. of 1997 World Conf. On Artificial Intelligence in Education, pp. 111-118, Dec. 1997 | |
| H | 71 | T. Herron, "Teaching with the Internet" 1998, The Internet and Higher Education, pp 217-222, 1998 | |
| H | 72 | D. Suthers, "Technical Report: Computer Aided Education and Training Initiative" at http://advlearn.irdc.pitt.edu/advlearn/papers/FINALREP.html , pp. 1-51, January 1998 | |
| H | 73 | Workflow Template - Developing a WFT Workflow System, "Simulating the Running of the WFT Workflow System", Template Software Business Simulator, Chapter 8, pp. 1-23, 1998 | |
| H | 74 | R. Schank, A. Fano, M. Jona and B. Bell, "The Design of Goal-Based Scenarios", Technical Report # 39, Northwestern University, The Institute for the Learning Sciences, pp. 1-58, March 1993 | |
| H | 75 | J. Anderson and B. Reiser, "The Lisp Tutor," Byte, pp. 159-75, April 1985 | |
| H | 76 | D. McArthur, M. Lewis and M. Bishay, "The Roles of Artificial Intelligence in Education: Current Progress and Future Prospects" at http://www.rand.org/education/mcarthur/Papers/role.html , pp. 1-42, July 2001 | |
| H | 77 | W. van Joolingen, S. King and T. de Jong, "The SimQuest Authoring System for Simulation-Based Discovery Learning," Proc. of 1997 World Conf. On Artificial Intelligence in Education, pp. 79-86, Dec. 1997 | |



OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ² |
|---------------------|-----------------------|--|----------------|
| H | 78 | A. Kumar, R. Pakala, R. Ragade and J. Wong, "The Virtual Learning Environment System," 28th Annual Frontiers in Education Conference, Conference Proceedings, Vol. 2, Nov. 4-7, 1998 | |
| H | 79 | M. McGee, "Train with Less Pain," at www.informationweek.com, pp. 150 and 154 October 1997 | |
| H | 80 | "TurboTax Deluxe Product Information" at http://www.intuit.com/turbotax/prodinfo/tldlx.html, January 2001 | |
| H | 81 | J. Manzoni and A. Angehrn, "Understanding Organizational Dynamics of IT-Enabled Change: A Multipedia Simulation Approach," Journal of Management Information Systems: JMIS, Vol. 14, No. 3, pp. 109-140, Winter 1997/1998 | |
| H | 82 | "User-Sensitive Multimedia Presentation System," IBM Technical Disclosure Bulletin, Vol. 39, No. 3, pp. 93-94 March 1996 | |
| H | 83 | R. Kemp and S. Smith, "Using Planning Techniques to Provide Feedback in Interactive Learning Environments," Proc. Sixth Int'l Conf. On Tools with Artificial Intelligence," pp. 700-703, November 1994 | |
| H | 84 | R. Kemp, "Using the Wizard of Oz Technique to Prototype a Scenario-Based Simulation Tutor," Proc. of 1997 World Conf. On Artificial Intelligence in Education, pp. 458-465, December 1997 | |
| H | 85 | R. Schank, "Virtual Learning: A Revolutionary Approach to Building a Highly Skilled Workforce," Personnel Psychology Vol. 51, No. 3, pp. 767-771, Autumn 1998 | |
| H | 86 | J. Breuker, "What are Intelligent Coaching Systems and Why are they (in)evitable?" IEEE Colloquium on Artificial Intelligence in Educational Software, pp. 2/1-2/5, June 1998 | |
| H | 87 | "Why Should the Teens Have All the Best Games? Management Skill with Oil, Health, Housing Games," Computergram Int'l, June 17, 1996 | |
| H | 88 | E. Tam, P. Allard, M. Faraj, M. Kaddoura, A. Mourad, H. Liu, A. Malowany, R. Marceau, L. Granger and J. Gagnon, "WITS: A Reusable Architecture for a VR-Based ITS" at http://advlearn.lrdc.pitt.edu/its-arch/papers/tam.html, pp. 1-5, July 2001 | |
| H | 89 | Computer Dictionary, 3 rd Edition, pp. 284, 276, 383, 446, 462, 507, 1997 | |
| H | 90 | L. Gensing-Prphal, "Flexible Learning", Credit Union Management Vol. 21, No. 2, pp. 32-33 and 38, Feb. 1998, | |
| H | 91 | J. Wilson and D. Mosher, "The Prototype of the Virtual Classroom," Journal of Instruction Delivery Systems, Summer 1994, at http://www.educause.edu/nlii/articles/mosherwils.html, pp. 1-9, July 2001 | |
| H | 92 | T. Burns, "Multimedia Training... 'Get Lemonade, Not a Lemon!'" Journal for Quality and Participation, Vol. 20, No. 3, pp. 22-28, June 1997, | |
| H | 93 | A. Seagren and B. Watwood, "The Virtual Classroom: Great Expectations. Delivering Graduate Education by Computer: A Success Story," 5 th Annual International Conf. for Community & Technical College Chairs, Deans and Other Organizational Leaders, pp 512-517, February 1996 | |

Examiner
Signature

Date
Considered

2/2/5

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.

³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.